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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/508,959

08/16/2005

Chaim Gilon

28557

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7590

07/23/2008

Martin Moynihan  
Anthony Castorina  
Suite 207  
2001 Jefferson Davis Highway  
Arlington, VA 22202

EXAMINER

DESAI, ANAND U

ART UNIT

PAPER NUMBER

1656

MAIL DATE

DELIVERY MODE

07/23/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/508,959	<b>Applicant(s)</b> GILON ET AL.	
	<b>Examiner</b> ANAND U. DESAI	<b>Art Unit</b> 1656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on April 16, 2008 & July 2, 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-69, 71, 72 and 74-131 is/are pending in the application.
- 4a) Of the above claim(s) 1-68, 74, 79-83 and 87-131 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 69, 71, 72, 75, 77, 78, 84 and 85 is/are rejected.
- 7) ☒ Claim(s) 76 and 86 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20080702</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This office action is in response to the amendment filed on April 16, 2008. Claims 70 and 73 have been cancelled. Claims 1-68, 74, 79-83, and 87-131 have been withdrawn previously.
2. Claims 69, 71, 72, 75-78, and 84-86 are currently pending and are under examination.

### ***Election/Restrictions***

3. The prior art search was extended to the next species that is H2A-beta galactosidase. The prior art search, however, was not extended unnecessarily to cover all nonelected species. Applicant is referred to MPEP 803.02 that states if prior art is then found that anticipates or renders obvious the Markush-type claim with respect to a nonelected species, the Markush-type claim shall be rejected and claims to the nonelected species held withdrawn from further consideration. Therefore, claim 74 is withdrawn and drawn to non-elected species.

### **Withdrawal of Rejections**

4. The rejection of claim 73 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn based on the cancellation of the claim.
5. The rejection of claims 69-72, 75-78, and 84-86 under 35 U.S.C. 103(a) as being unpatentable over Baake et al. (October 30, 2006 IDS document 31) in view of Guo et al. (US 2003/0229202 A1) is withdrawn based on the remarks stating Guo et al. teach a

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nuclear localization sequence that differs from previously identified nuclear localization sequences (citing paragraph [0042] of Guo et al.).

## **Pending Rejections**

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 69, 75, 77, and 78 are rejected under 35 U.S.C. 102(b) as being anticipated by Baake et al. (October 30, 2006 IDS document 31).

The rejection was explained in the office action mailed October 16, 2007.

### **Response to Remarks**

8. Applicant's state Baake et al. fail to teach that the H2A-beta galactosidase conjugate is capable of transport across the plasma membrane. Applicant's state they have surprisingly uncovered that the mechanism involved in delivering a macromolecule-of-interest conjugated to a histone moiety into a cell differs from the mechanism of transport into the nucleus. The claimed conjugate does not require active transport and is non-endocytic. Applicants have also stated they have amended claim 69 so as to more clearly distinguish embodiments of the present invention from the teachings of Baake et al. The claim is amended so as to recite "co-incubating the cell and a conjugate..." instead of "contacting the cell with a conjugate".

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Applicant's arguments filed April 16, 2008 have been fully considered but they are not persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., transport across the plasma membrane and transport that does not require energy and is non-endocytic) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.1993). Claim 69 is drawn to a method of delivering a macromolecule-of-interest into a cell, the method comprising co-incubating the cell and a conjugate comprising a histone moiety covalently linked to said macromolecule-of-interest, said histone moiety being transportable through cell membranes and importable into cell nuclei. The claim is drawn to transport through a *cell membrane*, not only limited to a plasma membrane. A person skill in the art would recognize that a nuclear membrane is a cell membrane. The conjugate would have to be co-incubated with the cell to be expressed in the cell. The amended limitation does not distinguish from the teachings of Baake et al.

9. Claims 69, 71, 72, 78, 84, and 85 are rejected under 35 U.S.C. 102(b) as being anticipated by Pardridge et al. (U.S. Patent 4,902,505).

Pardridge et al. disclose a chimeric peptide adapted for delivering a neuropharmaceutical agent into the brain by transcytosis through the blood-brain barrier, said chimeric peptide comprising a transportable peptide capable of crossing the blood-brain barrier by transcytosis conjugated with said neuropharmaceutical agent, wherein said transportable peptide is histone. The histone is isolated from a human source. The

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transportable peptide and neuropharmaceutical agent are conjugated via a conjugation agent. The conjugation can comprise peptide thiolation (see claims 1, 2, 7, and 8).

### ***Claim Objections***

10. Claims 76 and 86 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **Art of Record**

11. Laskowitz et al. (U.S. Patent 7,205,280 B2) disclose the use of histone as a carrier molecule conjugated to a peptide to transport a fusion peptide across the blood-brain barrier (see claims 20 and 21).

### ***Conclusion***

12. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANAND U. DESAI whose telephone number is (571)272-0947. The examiner can normally be reached on Monday - Friday 9:00 a.m. - 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Kathleen Kerr Bragdon can be reached on (517) 272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 21, 2008

/Anand U Desai, Ph.D./  
Patent Examiner, Art Unit 1656